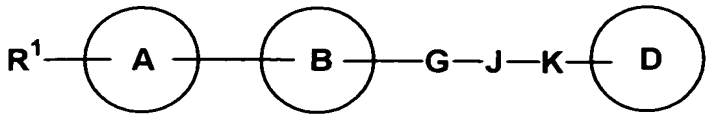
CLAIMS

1. A compound of formula (I):



(I)

wherein R^1 represents aliphatic hydrocarbon optionally having substituent(s),

ring A represents a cyclic group comprising at least one nitrogen atom optionally having further substituent(s) besides R^1,

ring B represents a cyclic group optionally having substituent(s) and is attached to ring A via a bond,

G represents a bond or a spacer comprising 1-4 atoms in the main chain,

J represents a spacer having a hydrogen-bond accepting group optionally having substituent(s),

K represents a bond or a spacer comprising 1-4 atoms in the main chain, and

ring D represents a cyclic group optionally having substituent(s), which may form a ring together with a substituent on J,

a salt thereof, an N-oxide thereof, a solvate thereof or a prodrug thereof.

2. The compound according to claim 1, wherein the hydrogen-bond accepting group in J is carbonyl, thiocarbonyl, imino, sulfonyl or sulfinyl, a salt thereof, an N-oxide thereof, a solvate thereof or a prodrug thereof.

3. The compound according to claim 1,

wherein J is -CO-, -$CONR^2$-, -NR^2CO-, -OCO-, -COO-, -CS-, -$CSNR^2$-, -NR^2CS-, -O-CS-, -CS-O-, -SO_2-, -SO_2NR^2-, -NR^2SO_2-, -O-SO_2-, -SO_2-O-, -S(O)-, -$S(O)NR^2$-, -$NR^2S(O)$-, -O-S(O)-, -S(O)-O-, or -$C(=NR^3)$-,

wherein R^2 represents a hydrogen atom, optionally substituted aliphatic hydrocarbon or an optionally substituted cyclic group and R^3 represents a hydrogen atom, cyano, optionally protected hydroxy, optionally substituted amino, optionally substituted aliphatic hydrocarbon or an optionally substituted cyclic group,

a salt thereof, an N-oxide thereof, a solvate thereof or a prodrug thereof.

4. The compound according to claim 1,

wherein J is -$N(COR^4)$-, -$N(CONHR^5)$-, -$N(COOR^6)$-, or -$N(SO_2R^7)$-,

wherein R^4, R^5, R^6 and R^7 each represents a hydrogen atom, optionally substituted aliphatic hydrocarbon or an optionally substituted cyclic group,

a salt thereof, an N-oxide thereof, a solvate thereof or a prodrug thereof.

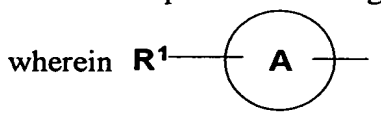
5. The compound according to claim 1, wherein the cyclic group represented by ring D is a C3-15 mono-, bi- or tri-cyclic aromatic carbocyclic ring which may be partially or completely saturated, or a 3-15 membered mono-, bi- or tri-cyclic aromatic heterocyclic ring comprising 1-5 of heteroatom selected from oxygen, nitrogen and sulfur which may be partially or completely saturated,

a salt thereof, an N-oxide thereof, a solvate thereof or a prodrug thereof.

6. The compound according to claim 1, wherein the cyclic group represented by ring D is a C3-15 mono-, bi- or tri-cyclic aromatic carbocyclic ring, or a 3-15 membered mono-, bi- or tri-cyclic aromatic heterocyclic ring containing 1-5 of heteroatom,

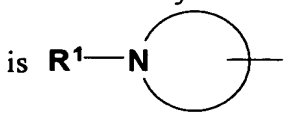
a salt thereof, an N-oxide thereof, a solvate thereof or a prodrug thereof.

7. The compound according to claim 1, wherein

wherein 

,

wherein all symbols have the same meanings as in claim 1,

is 

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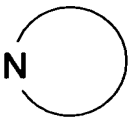
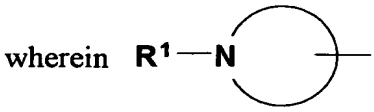
wherein 

is a cyclic ring comprising at least one nitrogen atom and optionally having substituent(s) and R^1 has the same meaning as in claim 1,

a salt thereof, an N-oxide thereof, a solvate thereof or a prodrug thereof.

8. The compound according to claim 7,

wherein 

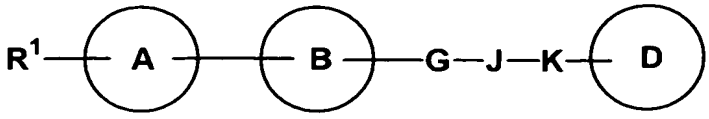
,

wherein all symbols have the same meanings as in claim 1,

is piperidine, piperazine, pyrrolidine, 1,4-diazepane, 1,2,3,6-tetrahydropyridine or 8-azabicyclo[3.2.1]octane ring optionally having substituent(s),

a salt thereof, an N-oxide thereof, a solvate thereof or a prodrug thereof.

9. A pharmaceutical composition comprising a compound of formula (I)



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a salt thereof, an N-oxide thereof, a solvate thereof or a prodrug thereof.

10. The composition according to claim 9, which is a chemokine receptor antagonist.

11. The composition according to claim 10, wherein the chemokine receptor is CCR1.

12. The composition according to claim 10, wherein the chemokine receptor is CCR5.

13. The composition according to claim 10, which is a medicament for the prevention and/or treatment of human immunodeficiency virus infectious disease, acquired immunodeficiency syndrome and/or organ rejection in transplantation.

14. The composition according to claim 10, which is a medicament for the prevention and/or treatment of multiple sclerosis and/or arthritis.

15. A method for the prevention and/or treatment of diseases induced by a chemokine receptor in a mammal, which comprises administering to an mammal an effective amount of the compound according to claim 1, a salt thereof, an N-oxide thereof, a solvate thereof or a prodrug thereof.

16. Use of the compound according to claim 1, a salt thereof, an N-oxide thereof, a solvate thereof or a prodrug thereof, for the manufacture of a medicament for the prevention and/or treatment of the diseases induced by chemokine receptors.

17. A medicament comprising the compound according to claim 1, a salt thereof, an N-oxide thereof, a solvate thereof or a prodrug thereof, and one or more selected from the group consisting of a protease inhibitor, a reverse transcriptase inhibitor, a fusion inhibitor, an HIV integrase inhibitor, a chemokine inhibitor, a steroidal drug, interferon, an immunosuppressant, an aldose reductase inhibitor, a cannabinoid-2 receptor agonist, adrenocorticotropic hormone, a metalloproteinase inhibitor, a non-steroidal anti-inflammatory drug, a prostaglandin drug, a phosphodiesterase inhibitor, a disease modifying anti-rheumatic drug, an anti-inflammatory enzyme drug, a cartilage-protecting drug, a T-cell inhibitor, a TNF-α inhibitor, an IL-6 inhibitor, an interferon γ agonist, an IL-1 inhibitor and an NF-κB inhibitor.